

This listing of claims will replace all prior versions, and listings, of claims in the application.

**Listing of Claims:**

1. (currently amended) A moisture sensor for detecting the presence of moisture, comprising an electric circuit and ICPs (intrinsic conduction polymers), electric properties of the ICPs being dependent on the amount of moisture with which they come into contact and the electric circuit ~~wherein the moisture sensor comprises two layers of different electrochemical potential, at least one of said layers comprising said ICPs, and a dielectric separating said layers and being of a type capable of absorbing moisture and said moisture sensor being arranged for detecting a change of the electric properties of the ICPs for detecting moisture, characterized in that the ICPs form part of a capacitor, the electric circuit being arranged for detecting a change of capacitance for detecting the moisture.~~ ~~, in use, said moisture as a voltage difference between the layers.~~

2. (previously amended) A moisture sensor according to claim 1, characterized in that on a first side of a substrate, there is provided a layer comprising the ICPs and that on a second side of the substrate opposite the first side, electrodes are provided which together with the layer form part of a capacitor.

3. (original) A moisture sensor according to claim 2, characterized in that the electrodes are designed as a comb capacitor.

4. (previously amended)) A moisture sensor according to claim 1, characterized in that on a first side of a substrate, there is provided a layer comprising the ICPs, while at least one first electrode is provided on a second side of the substrate opposite the first side and at least one second electrode is provided on the layer, such that the layer lies at least partly between the first and the second electrode, the first and second electrodes together with the ICPs forming part of a capacitor.

5. (previously amended) A moisture sensor according to claim 4, characterized in that on the first side of the substrate, there are also provided conductive paths which together with the capacitor form an LC electrical circuit.

6. (withdrawn) A moisture sensor according to claim 1, characterized in that on a first side of a substrate, there is provided a layer comprising the ICPs, while at least one electrically conductive path comprising windings is provided on a second side of the substrate opposite the first side, the electrically conductive path forming a coil of the electric circuit and, together with the layer, the capacity.

7. (withdrawn) A moisture sensor according to claim 1, characterized in that the electric circuit comprises a transponder for obtaining wirelessly information about the detected presence of the moisture.

8. (withdrawn) A moisture sensor according to claim 7, characterized in that the transponder comprises a resonant circuit comprising the capacity.

9. (withdrawn) A moisture sensor for detecting the presence of moisture, comprising an electric circuit and ICPs (intrinsic conduction polymers), electric properties of the ICPs being dependent on the amount of moisture with which they come into contact and the electric circuit being arranged for detecting a change of the electric properties of the ICPs for detecting the moisture, characterized in that the electric circuit comprises a transponder incorporated into a casing at least partially manufactured from the ICPs.

10. (withdrawn) A moisture sensor according to claim 9, characterized in that the properties of the ICPs are such that the resistance of the ICPs increases when they come into contact with the moisture.

11. (withdrawn) A moisture sensor according to claim 1, characterized in that the moisture sensor comprises a current conductive fabric comprising ICPs, at least one pair of electrodes connected to a first side of the fabric and electrodes located on a second side of the fabric opposite the first side, connected to the first and second pair of electrodes by means of a capacitive coupling and forming part of the electric circuit.

12. (withdrawn) A moisture sensor for detecting the presence of moisture, comprising an electric circuit and ICPs (intrinsic conduction polymers), electric properties of the ICPs being dependent on the amount of moisture with which they come into contact and the electric circuit being arranged for detecting a change of the electric properties of the ICPs for detecting moisture, characterized in that the moisture sensor comprises a current conductive fabric comprising the ICPs.

13. (withdrawn) A moisture sensor according to claim 12, characterized in that the moisture sensor comprises least one pair of electrodes forming part of the electric circuit and connected to the fabric at different locations.

14. (withdrawn) A moisture sensor according to claim 13, characterized in that the least one pair of electrodes is connected to a first side of the fabric and that the electric circuit further comprises electrodes disposed on a second side of the fabric opposite the first side and connected, by means of a capacitive coupling, to the least one pair of electrodes.

15. (withdrawn) A moisture sensor according to claim 14, characterized in that the moisture sensor comprises least two pairs of electrodes.

16. (withdrawn) A moisture sensor for detecting the presence of moisture, comprising an electric circuit and ICPs (intrinsic conduction polymers), electric properties of the ICPs being dependent on the amount of moisture with which they come into contact and the electric circuit being arranged for detecting a change of the electric properties of the ICPs for detecting the moisture, characterized in that the moisture sensor comprises at least two layers, each layer comprising ICPs and a dielectric incorporated between the layers, the dielectric being of a type capable of absorbing moisture and the sensor being arranged for detecting, in use, the moisture on the basis of a voltage difference between the layers.

17. (previously amended) A diaper provided with a moisture sensor according to claim 1.

18. (previously amended) A diaper provided with a moisture sensor according to claim 2, characterized in that the first side of the substrate faces an inner side of the diaper.

19 - 22. (canceled)